ABSTRACT

A receiver includes a controller which receives A/D sampled input signals and shifts the sampled digital signal to compensate for Doppler effect in the input signal prior to demodulation. The controller compensates for a Doppler increased frequency by shifting the sampled digital signal so as to skip a sample period every n samples. This may be achieved by decreasing a cycle of m samples by one sample period every n samples. The controller compensates for a Doppler decreased frequency by shifting the sampled digital signal so as to add a sample period every n samples. This may be achieved by repeating a sample every n samples to shift the sampled digital signal. The compensation is performed in software on a multi-threaded processor.